

New sites and range extensions for endemic and endangered birds in extreme north-east Brazil

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SUMMARY.—Between 1998 and 2011 we surveyed diverse localities within the Atlantic Forest and Caatinga biomes in the north-east Brazilian state of Rio Grande do Norte, registering the presence of Ochraceous Piculet *Picumnus limae*, Silvery-cheeked Antshrike *Sakesphorus cristatus* and Yellow-faced Siskin *Sporagra yarrellii*, none of which had definitely been recorded previously in the state. We also present new records of Tawny Piculet *Picumnus fulvescens*, expanding our knowledge of the species' distribution.

In north-east Brazil, the state of Rio Grande do Norte is one of the least visited by naturalists and museum expeditions (Olmos 2003, Pacheco 2004). Information on its avifauna is limited to the historical records of Marcgrave (1942), several recent inventories (e.g., Nascimento 2000, Larrazábal *et al.* 2002, Olmos 2003, Azevedo Júnior *et al.* 2004) and the contributions of Sick (1991), Teixeira *et al.* (1993), Praxedes *et al.* (1997), Varela-Freire (1997), Varela-Freire & Araújo (1997), Medeiros *et al.* (2000), Whitney *et al.* (2000) and Silveira *et al.* (2003). Despite our lack of knowledge of the state's avifauna, some areas within the Atlantic Forest, Caatinga and littoral are considered priorities for biodiversity conservation (Conservation International 2000, Larrazábal *et al.* 2002, MMA 2002, Bencke & Maurício 2006). Here we present new data on species considered to be rare, threatened or endemic.

TAWNY PICULET *Picumnus fulvescens*

Considered Near Threatened (BirdLife International 2011b), *P. fulvescens* is confined to north-east Brazil (Sick 1997), where it is widespread from eastern PiauÍ and southern Ceará to Paraíba, Pernambuco, Alagoas and Sergipe (BirdLife International 2011b, Ruiz-Esparza *et al.* 2011). It was first recorded in Rio Grande do Norte at Seridó Ecological Station, in the Serra Negra do Norte (Nascimento 2000). We found this piculet to be widespread in the Atlantic Forest of Rio Grande do Norte and the south-central caatinga belt (Fig. 1, Table 1). On the east coast it occurs from Baía Formosa and Canguaretama, in the far south of the state, north to Parnamirim and Natal (Fig. 1), and we have also observed the species in deciduous forest at the ecotone between Atlantic Forest and caatinga. *P. fulvescens* is rather catholic in its habitat requirements, being found in caatinga, deciduous forest, semi-deciduous forest, and coastal savanna and scrub (Table 1). It is also found in small forest fragments and in regenerating areas, including at forest borders.

OCHRACEOUS PICULET *Picumnus limae*

Endemic to north-east Brazil and considered threatened (MMA 2003). In Ceará, until recently it was known only from the uplands of Maranguape, Aratanha and Baturité, but the species has since been found across almost the entire state (Girão *et al.* 2007). It also occurs in forest islands (known locally as *brejos de altitude*) on the slopes of residual plateaux

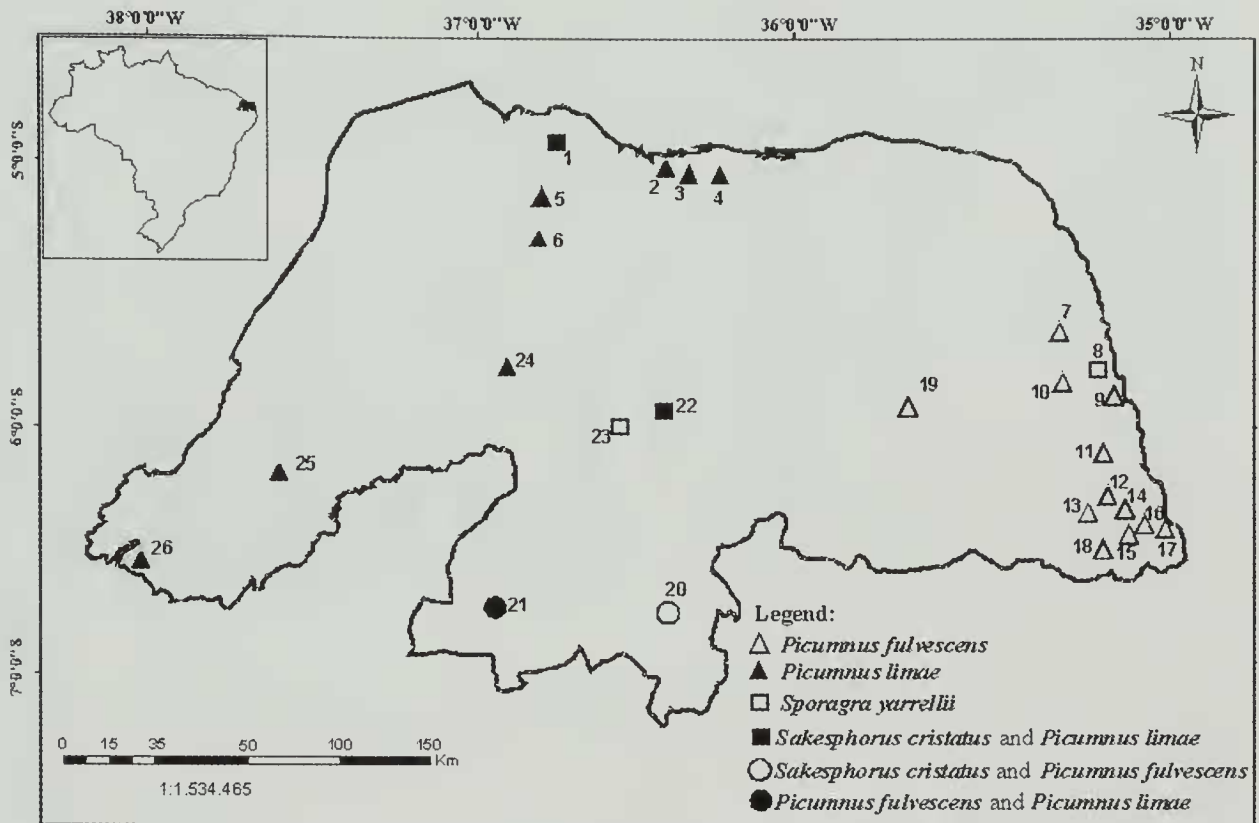


Figure 1. Locations of records of endemic and / or endangered birds in the state of Rio Grande do Norte. 1. Dunas do Rosado, Porto do Mangue, 2. Soledade, Macau, 3. Ponta do Tubarão Sustainable Development Reserve, Macau, 4. Petrochemical Petrobras, Guamaré, 5. Lagoa Queimado, Pendências, 6. Petrochemical plant, Alto do Rodrigues, 7. Landfill, Ceará Mirim, 8. UFRN campus, Natal, 9. Empresa de Pesquisa Agropecuária do Rio Grande do Norte (EMPARN), Parnamirim, 10. Olho D'água, Macaíba, 11. Golani, Nízia Floresta, 12. Fazenda Bom Jardim, Goianinha, 13. Mata Paraíba, Canguaretama, 14. Vale do Catu, Canguaretama, 15. Mata Bela, Baía Formosa, 16. Mata Dançarino, Baía Formosa, 17. Mata Estrela RPPN, Baía Formosa, 18. Piquiri Una APA, Espírito Santo, 19. Serra do Formigueiro, Barcelona, 20. Fazenda Malhada Vermelha, Parelhas, 21. Seridó Ecological Station, Serra Negra do Norte, 22. Pimenteira, Serra de Santana, Santana do Matos, 23. BR 226, Florânia, 24. Oiteiro, Campo Grande, 25. Mata Sr. Clezinho, Martins, 26. Serra de São José, Luís Gomes.

in the caatinga of Pernambuco (Roda 2002). Varela-Freire & Araújo (1997) mentioned, without details, the presence of *P. limae* in the interior of Rio Grande do Norte, around Seridó. We observed this species in the south-centre, far west and along the north coast of the state (Fig. 1, Table 1), mainly in areas of caatinga, except in the west, where it was found in forest islands atop mountains (Table 1). Our surveys found *P. limae* and *P. fulvescens* syntopically only at Seridó Ecological Station, in the Serra Negra do Norte. However, in southern Ceará, Olmos *et al.* (2005) found individuals of *P. limae* resembling *P. fulvescens*, suggesting they could be conspecific. *P. limae* generally occurs in secondary forest and near areas destroyed by monocultures, especially in the Serra do Martins, where the natural vegetation has been mainly replaced by cashew *Anacardium occidentale* plantations, and the Serra Santana do Matos. In the north of the state *P. limae* has been recorded in fragmented caatingas, primarily modified by oil drilling, farming and urban growth, further confirming that the species can adapt to habitat change.

SILVERY-CHEEKED ANTSHRIKE *Sakesphorus cristatus*

Found from Piauí to Ceará, Paraíba, Pernambuco, and from Bahia to central Minas Gerais (Zimmer & Isler 2003, Marini & Lopes 2005). We recorded *S. cristatus* in caatinga in the

TABLE 1

Locations, habitat and documentation (if any) for Tawny Piculet *Picumnus fulvescens*, Ochraceous Piculet *P. imae*, Silvery-cheeked Antshrike *Sakesphorus cristatus* and Yellow-faced Siskin *Sporanga yarrellii* records in Rio Grande do Norte. Habitats: SF (semi-deciduous forest), DF (deciduous forest), CA (Caatinga), TB (*tabuleiro* = coastal cerrado) and AA (human-modified habitat). Observer: 1 = Marcelo da Silva, 2 = Bruno Rodrigo de Albuquerque França, 3 = Luiz Yoshihiro Garcia de Lima Hagi, 4 = Miguel Rocha Neto, 5 = Jorge B. Irusta, 6 = Francisco Sagot Martins, 7 = Damião Valdenor de Oliveira, 8 = Mauro Pichorim. Where stated, photographs and sound-recordings have been deposited on WikiAves (www.wikiaves.com.br).

Location	Coordinates and altitude	Date	Number of individuals	Habitat	Documentation	Observer
<i>Picumnus fulvescens</i>						
Landfill, Ceará Mirim	05°42'52"S, 35°22'59"W; 66 m	June–September 2005	Pair with nest	SF	Photograph	5
		4 August 2007	Pair	SF	Photograph	1,2,5
		14 July 2011	Pair	SF	Photographs (WA394419, WA394421)	
Empresa de Pesquisa Agropecuária do Rio Grande do Norte (EMPARN)	05°55'45"S, 35°11'21"W; 39 m	14 October 06	1♂	SF	Sight and aural record	1
Olho D'água, Macaíba	05°53'21"S, 35°23'07"W; 56 m	5 April 2007	2♂ and 2♀	DF	Sound-recording and photograph	1,2,3
		11 September 2008	1♂	DF	Photograph (WA235426)	1
Golani, Nízia Floresta	06°07'44"S, 35°13'40"W; 90 m	25 February 2006	1♂ and 2♀	SF	Sight and aural record	1
Fazenda Bom Jardim, Goianinha	06°18'25"S, 35°14'03"W; 90 m	27 June 2006	One	SF	Aural record	1
Mata Paraíba, Canguaretama	06°26'47"S, 35°07'26"W; 71 m	13 April 2006	One	SF	Aural record	1
Vale do Catu, Canguaretama	06°23'17" S, 35°09'25"W; 30 m	12–13 December 2005	Two	SF	Sight and aural record	6
Mata Bela, Baía Formosa	06°22'25"S, 35°01'24"W; 64 m	14 April 2006	One	SF	Aural record	1
		25 March 2007	One	SF	Sight-only record	1,4
Mata do Dançarino, Baía Formosa	06°24'51"S, 35°04'40"W; 35 m	6 October 2007	Pair	SF	Sight and aural record	1

Location	Coordinates and altitude	Date	Number of individuals	Habitat	Documentation	Observer
Mata Estrela RPPN, Baía Formosa	06°22'30"S, 35°01'21"W; 47 m	30 November 2008	1♂	SF	Sound-recording	1
Piquiri Una APA, Espírito Santo	06°22'30"S, 35°17'17"W; 44 m	2 December 2006	Two pairs	SF, TB	Sound-recording	1
		17 December 2006	Pair	SF	Sight and aural record	1
		29 May 2011	1♂	SF	Photograph (WA361275)	2
Serra do Formigueiro, Barcelona	06°00'17"S, 35°55'33"W; 230 m	2 March 2006	1♂	CA	Sight-only record	5
Fazenda Malhada Vermelha, Parelhas	06°44'54" S, 36°40'29" W; 368 m	9 June 2006	Two	CA	Photograph	6
Seridó Ecological Station, Serra Negra do Norte	06°34'51"S, 37°15'05"W; 200 m	10 March 2007	One	CA	Sight and aural record	8
<i>Pitumnus lima</i>						
Dunas do Rosado, Porto do Mangue	04°59'42"S, 036°52'46"W; 102 m	29 April 2007	2♂ and 2♀	CA	Sound-recording	1,2
Soledade, Macau	05°05'36"S, 36°30'22"W; 14 m	16 July 2005	1♀	CA	Photograph	5
		5 January 2010			Photograph (WA186314)	1
Ponta do Tubarão Sustainable Development Reserve, Macau	05°06'28"S, 36°27'49"W; 20 m	11 June 2006	1♀	CA	Sight and aural record	1,2
		24 June 2006	1♂	CA	Sight and aural record	1,2
Petrochemical Petrobras, Guamaré	05°08'44"S, 36°22'53"W; 13 m	2-3 July 2011	2♂	CA	Photographs (WA385412, WA385420)	1,2
		13-15 February 2009	Several pairs	CA	Sound-recording	1,2
		3 January 2009	1♂, 1♀	CA	Sound-recording (WA253695)	1
		14-18 May 2010	2♂, 2♀	CA	Photographs (WA143935, WA235424, WA316993)	1,2
Lagoa Queimado, Pendências	05°15'37"S, 36°40'35"W; 10 m	7 June 2006	1♀	CA	Photograph	5

Location	Coordinates and altitude	Date	Number of individuals	Habitat	Documentation	Observer
Petrochemical plant, Alto do Rodrigues	05°19'04"S, 36°41'48"W; 14 m	November- December 2006	1 ♂, 1 ♀	CA	Photograph	5
Serido Ecological Station, Serra Negra do Norte	06°34'51"S, 37°15'05"W; 200 m	29 November 2002, 5 December 2002 and 20 June 2011	Several pairs	CA	Sight-only records	6,8
Sítio Pimenteira, Serra de Santana, Santana do Matos	06°03'31"S, 36°43'32"W; 700 m	31 January 2009	One pair and 1 ♀	CA	Sight-only record	6
Oiteiro, Campo Grande	05°47'57"S, 37°25'49"W; 165 m	17-18 January 2009	Several pairs	CA	Sight-only record	1
Mata Sr. Clezinho, Martins	06°03'52"S, 37°56'14"W; 679 m	18 March 2006	Two pairs	SF	Sight and aural record	1
Serra de São José, Luis Gomes	06°19'41"S, 38°25'17"W; 335 m	4 June 2006	One	SF	Aural record	1,2,4
<i>Sakesphorus cristatus</i>						
Dunas do Rosado, Porto do Mangue	04°59'42"S, 36°52'46"W; 102 m	29 December 2006	2 ♂	CA	Sound-recording	1,2
Fazenda Malhada Vermelha, Parelhas	06°44'54"S, 36°40'29"W; 368 m	14 November 2005 11 June 2006 9-11 March 2007 28-29 August 2007	Pair Two Two Pair	CA	Sound-recording and photograph	6
Pimenteira, Serra de Santana, Santana do Matos	06°03'31"S, 36°43'32"W; 700 m	29 January-1 February 2009	1 ♂, 1 ♀ and a pair	CA	Sight-only record	6,7
<i>Sporagra yarrellii</i>						
UFRN campus, Natal	05°50'29"S, 35°1'09"W; 48 m	June 1998	One	AA	Sight-only record	5
BR 226, Florânia	06°05'11"S, 36°56'07"W; 136 m	3 June 2006	1 ♀	CA	Sound-recording and photograph (WA295444)	1, 2,4

hinterland at altitudes of 360–700 m and on the north coast at c.100 m. Although expected to occur in Rio Grande do Norte, ours are the first documented records in the state (Table 1).

YELLOW-FACED SISKIN *Sporagra yarrellii*

A globally threatened species endemic to north-east Brazil, where it occurs from Piauí to Ceará and in Paraíba to Bahia (MMA 2003, BirdLife International 2011a). In Rio Grande do Norte there is only one undocumented record from Serra Verde, Taipu (Praxedes *et al.* 1997). We photographed a female in a patch of caatinga beside highway BR 226, in the municipality of Florânia (Fig. 1, Table 1). In addition, J. B. Irusta (pers. comm.) observed a probable escapee on the campus of the Federal University of Rio Grande do Norte, in Natal. This species is sold illegally in several markets around Natal, but these birds may be trapped in neighbouring states as their dealers state that they originate in Paraíba and Pernambuco. During 2006–08 wildlife officers confiscated three, five and single individuals, respectively, which were later released in caatingas at Pureza, Tangará, Currais Novos, Campo Redondo and Santa Cruz, all in Rio Grande do Norte (A. P. Leite pers. comm.). In the Serra de Santana, Santana do Matos, some local people claim that *S. yarrellii* appears in upland areas (c.700 m) in March (suggesting migration) when they are illegally captured. The trade in this endangered bird in Rio Grande do Norte and in other north-eastern states is concerning (Pereira & Brito 2005, Rocha *et al.* 2006), with the relative lack of recent records suggesting a steady decline and that legal measures to prevent the species' capture and sale require enforcement.

Our data on *P. limae* and *S. yarrellii* are important for establishing regional conservation priorities. The caatinga, montane forest islands and coastal forest fragments are being steadily destroyed and fragmented (SNE 2002, Fundação SOS Mata Atlântica 2009). The presence of threatened species should influence the selection of future conservation units. Seridó Ecological Station (1,128 ha) is the only fully protected area in the state, meaning that the protected area network is in urgent need of expansion. The montane forest islands of Luis Gomes are a priority as they are important for the conservation of *P. limae* and other species, with large remnants still biologically unexplored. Also relevant is the need for population surveys of several poorly known species and the exploration of other ecosystems found in the state.

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References:

- Azevedo Junior, S. M., Larrazábal, M. E. & Pena, O. 2004. Aves aquáticas de ambientes antrópicos (Salinas) do Rio Grande do Norte, Brasil. Pp. 255–266 in Branco, J. O. (ed.) *Aves marinhas e insulares brasileiras: bioecologia e conservação*. Ed. Univale, Itajaí.
- Bencke, G. A. & Maurício, G. N. 2006. Áreas importantes para a conservação das aves nos estados do domínio da Mata Atlântica: síntese dos resultados. Pp. 91–99 in Bencke, G. A., Maurício, G. N., Develey, P. F. & Goerck, J. M. (eds.) *Áreas importantes para a conservação das aves no Brasil. Parte I - estados do domínio da Mata Atlântica*. SAVE Brasil, São Paulo.
- BirdLife International. 2011a. Species factsheet: *Carduelis yarrellii*. www.birdlife.org (accessed 10 March 2011).
- BirdLife International. 2011b. Species factsheet: *Picumnus fulvescens*. www.birdlife.org (accessed 10 March 2011).
- Conservation International do Brasil. 2000. *Avaliação e ações prioritárias para a conservação da biodiversidade da Mata Atlântica e Campos Sulinos*. Ministério do Meio Ambiente, Brasília.

- Fundação SOS Mata Atlântica. 2009. *Atlas da evolução dos remanescentes florestais e ecossistemas associados do domínio da Mata Atlântica no período 2005–2008*. Instituto de Pesquisas Espaciais, São Paulo.
- Girão, W., Albano, C., Pinto, P. T. & Silveira, L. F. 2007. Avifauna da Serra de Baturité, Ceará: dos naturalistas à atualidade. Pp. 187–224 in Oliveira, T. S. & Araújo, F. S. (eds.) *Diversidade e conservação da biota da Serra de Baturité, Ceará*. Ed. UFC, COELCE, Fortaleza.
- Larrazábal, M. E., Azevedo Junior, S. M. & Pena, O. 2002. Monitoramento de aves limícolas na Salina Diamante Branco, Galinhos, Rio Grande do Norte, Brasil. *Rev. Bras. Zool.* 19: 1081–1089.
- Marcgrave, J. 1942. [Marcgrave, G. 1648]. *História natural do Brasil*. Imprensa Oficial do Estado, São Paulo.
- Marini, M. A. & Lopes, L. E. 2005. Novo limite sul na distribuição geográfica de *Sakesphorus cristatus* (Thamnophilidae). *Ararajuba* 13: 105–106.
- Medeiros, J. A., Silveira, A. G. & Varela-Freire, A. A. 2000. Zoogeografia do Rio Grande do Norte VI: listagem provisória das aves do açude Riacho do Roçado, São José do Seridó, RN. *Sociedade e Território* 14: 29–34.
- MMA (Ministério do Meio Ambiente). 2002. *Avaliação e ações prioritárias para a conservação da biodiversidade da caatinga*. MMA / SBF, Brasília.
- MMA (Ministério do Meio Ambiente). 2003. *Lista das espécies da fauna brasileira ameaçadas de extinção*. Instrução Normativa n° 3, 27 de maio de 2003. Diário Oficial da República Federativa do Brasil, Brasília.
- Nascimento, J. L. X. 2000. Estudo comparativo da avifauna em duas Estações Ecológicas da Caatinga: Aiuaba e Seridó. *Melopsittacus* 3: 12–35.
- Olmos, F. 2003. Birds of Mata Estrela private reserve, Rio Grande do Norte. *Cotinga* 20: 26–30.
- Olmos, F., Silva, W. A. G. & Albano, C. 2005. Levantamentos rápidos de aves na Caatinga do sul do Ceará e oeste de Pernambuco, nordeste do Brasil. *Pap. Avuls. Zool. S. Paulo* 45: 179–199.
- Pacheco, J. F. 2004. As aves da Caatinga: uma análise histórica do conhecimento. Pp. 189–250 in Silva, J. M. C., Tabarelli, M., Fonseca, M. T. & Lins, L. V. (eds.) *Biodiversidade da Caatinga: áreas e ações prioritárias para a conservação*. Ministério do Meio Ambiente & Universidade Federal de Pernambuco, Brasília.
- Pereira, G. A. & Brito, M. T. 2005. Diversidade de aves silvestres brasileiras comercializadas nas feiras livres da Região Metropolitana do Recife, Pernambuco. *Atualidades Orn.* 126: 14.
- Praxedes, G. C., Araújo, M. F. F. & Varela-Freire, A. A. 1997. Zoogeografia do Rio Grande do Norte II. Levantamento preliminar da ornitofauna da micro-região da Serra Verde (Taipu, RN). *Caderno Norte-Rio-Grandense de Temas Geográficos* 11: 82–89.
- Rocha, M. S. P., Cavalcanti, P. C. M., Sousa, R. L. & Alves, R. R. N. 2006. Aspectos da comercialização ilegal de aves nas feiras livres de Campina Grande, Paraíba, Brasil. *Rev. Biol. Ciênc. Terra* 6: 204–221.
- Roda, S. A. 2002. Aves endêmicas e ameaçadas de extinção no Estado de Pernambuco. Pp. 537–556 in Tabarelli, M. & Silva, J. M. C. (eds.) *Diagnóstico da biodiversidade de Pernambuco*. Secretaria da Ciência, Tecnologia e Meio Ambiente & Ed. Massangana, Recife.
- Ruiz-Esparza, J., Rocha, P. A., Souza Ribeiro, A., Ferrari, S. P. & Araújo, H. F. P. 2011. Expansion of the known range of Tawny Piculet *Picumnus fulvescens* including the south bank of the Sao Francisco River in north-east Brazil. *Bull. Brit. Orn. Cl.* 131: 217–221.
- Sick, H. 1991. Distribution and subspeciation of the Biscutate Swift *Streptoprocne biscutata*. *Bull. Brit. Orn. Cl.* 111: 38–40.
- Sick, H. 1997. *Ornitologia brasileira*. Ed. Nova Fronteira, Rio de Janeiro.
- Silveira, L. F., Olmos, F., Roda, S. A. & Long, A. 2003. Notes on the Seven-coloured Tanager *Tangara fastuosa* in north-east Brazil. *Cotinga* 20: 82–88.
- SNE (Sociedade Nordestina de Ecologia). 2002. *Mapeamento da Mata Atlântica, seus ecossistemas associados: Paraíba e Rio Grande do Norte*. Relatório técnico. SNE, Recife.
- Teixeira, D. M., Otoch, R., Luigi, G., Raposo, M. A. & Almeida, A. C. C. 1993. Notes on some birds from northeastern Brazil. *Bull. Brit. Orn. Cl.* 113: 48–52.
- Varela-Freire, A. A. 1997. *Fauna Potiguar*. Ed. Univ. Federal do Rio Grande do Norte, Natal.
- Varela-Freire, A. A. & Araújo, S. A. 1997. Zoogeografia do Rio Grande do Norte I: a ornitofauna do Seridó Potiguar. *Caderno Norte-Rio-Grandense de Temas Geográficos* 11: 52–81.
- Whitney, B. M., Pacheco, J. F., Buzzetti, D. R. & Parrini, R. 2000. Systematic revision and biogeography of the *Herpsilochmus pileatus* complex, with description of a new species from northeastern Brazil. *Auk* 177: 869–891.
- Zimmer, K. J. & Isler, M. L. 2003. Family Thamnophilidae (typical antbirds). Pp. 448–681 in del Hoyo, J., Elliott, A. & Christie, D. A. (eds.) *Handbook of the birds of the world*, vol. 8. Lynx Edicions, Barcelona.

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